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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/532,506   | 01/12/2006  | Shingo Odajima       | 270934US0PCT        | 6838             |
| 22850  | 7590        | 04/30/2009           | EXAMINER            |                  |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      | USELDING, JOHN E    |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 1796                |                  |
|  |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
|  |             |                      | 04/30/2009          | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/532,506 | <b>Applicant(s)</b><br>ODAJIMA ET AL. |  |
|                              | <b>Examiner</b><br>JOHN USELDING     | <b>Art Unit</b><br>1796               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 3/26/2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 6-32 is/are pending in the application.
- 4a) Of the above claim(s) 6-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 31, 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manson (2,413,239) in view of Young et al. (2,595,911), Zemaitis (2,375,162), and Hershenberger (2,159,152).

Manson teaches a method of mixing a wax with natural rubber (column 3, lines 14-15). Manson teaches that the wax may vary in nature and that the preferred wax is paraffin wax (column 2, lines 48-52), which has a melting point within the range of about 110°F to about 140°F. The amount of natural rubber used is 2 to 25% (column 1, lines 47-53). Manson teaches an embodiment where the amount used is 15% (Table I). There is no solvent used therefore the obtained composition comprises less than 3ppm of solvent. The essential components of Manson are a polyvinyl ester resin (polyvinyl acetate is the preferred), wax, and rubber (column 1, lines 7-12). A 'consisting essentially of' claim occupies a middle ground between closed claims that are written in a 'consisting of' format and fully open claims that are drafted in a 'comprising' format." *PPG Industries v. Guardian Industries*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998). See also *Atlas Powder v. E.I. duPont de Nemours & Co.*, 750 F.2d

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1569, 224 USPQ 409 (Fed. Cir. 1984); *In re Janakirama-Rao*, 317 F.2d 951, 137 USPQ 893 (CCPA 1963); *Water Technologies Corp. vs. Calco, Ltd.*, 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, “consisting essentially of” will be construed as equivalent to “comprising.” See, e.g., *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355. See MPEP 2111.03. The applicant has taught in their specification that the composition can comprise other resins and specifically cites vinyl acetate resins, that can be included in as one of the resins used in their composition without materially affecting the composition (page 7, line 30 to page 8, line 15).

Manson fails to teach microcrystalline wax.

However, Young et al. teach that microcrystalline wax is a suitable substitute for paraffin wax when making compositions of wax and rubber (column 3, lines 62-66).

Since Manson is open to varying the wax and Young et al. teaches that paraffin wax and microcrystalline wax can be used interchangeably it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the microcrystalline wax of Young et al. as the wax of Manson to make a plastic composition. The waxes are being used for similar indented applications and therefore it is a simple substitution of one known element for another to obtain predictable results.

Manson is silent as to how the rubber is mixed with the wax.

However, Zemaitis and Hershenberger both teach a suitable method for mixing a rubber and a wax where there is an external force applied at a temperature lower than the melting completion temperature of the wax followed by heating the mixture at or above the melting completion temperature of the wax. Zemaitis teaches this in Example 1 and Hershenberger teaches it in page 2, lines 51-71.

Since Manson is silent as to how the rubber is mixed with the wax the skilled artisan would look to the prior art such as Zemaitis and Hershenberger for a suitable method. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply an external force applied at a temperature lower than the melting completion temperature of the wax followed by heating the mixture at or above the melting completion temperature of the wax as taught by Zemaitis and Hershenberger in the method of Manson to make a plastic composition.

Claims 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manson (2,413,239) in Young et al. (2,595,911), Zemaitis (2,375,162), and Hershenberger (2,159,152) as applied to claim 1 above as evidenced by Ciullo et al. (Rubber Formulary).

Manson also teaches polyisoprene rubber because natural rubber is polyisoprene. Ciullo et al. is being used as an evidentiary reference to prove that natural rubber is polyisoprene rubber (page 5, paragraph 3).

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Claims 1, 2, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett (2,906,640) in view of Ingle (2,299,951).

Bartlett teaches a method of making a microcrystalline wax and natural rubber composition (column 3, line 68 to column 4, line 10). They teach that components are mixed together then heated to above the melting completion temperature of the wax (column 4, lines 69 to column 5, line 13). Therefore while the temperature is being raised the external force of mixing is occurring at a lower temperature than the melting completion temperature of the wax and then the temperature is increased above the melting completion temperature of the wax. Bartlett teaches that the solvent selected should be one that will readily flash-off from the composition (column 4, lines 21-30) and that any residual solvent is evaporated to set a substantially rigid solid coating (column 2, lines 8-10). Bartlett teaches that the proportions of the ingredients may be varied and still obtain satisfactory results (column 3, lines 68-70).

Bartlett fails to teach the claimed amount of natural rubber.

However, Ingle teaches that in a wax/rubber composition for coating that up to 15 percent of rubber can be added to impart improved elasticity and flexibility (page 1, right column, lines 40-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use 15% of the natural rubber in the wax/rubber composition of Bartlett to impart improved elasticity and flexibility to the coating composition.

Claims 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett (2,906,640) in view of Ingle (2,299,951) as applied to claim 1 above as evidenced by Ciullo et al. (Rubber Formulary).

Bartlett also teaches polyisoprene rubber because natural rubber is polyisoprene rubber. Ciullo et al. is being used as an evidentiary reference to prove that natural rubber is polyisoprene (page 5, paragraph 3).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 2, 31, and 32 have been considered but are moot in view of the new ground(s) of rejection.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN USELDING whose telephone number is (571)270-5463. The examiner can normally be reached on Monday-Thursday 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Uselding  
Examiner  
Art Unit 1796

/Marc S. Zimmer/  
Primary Examiner, Art Unit 1796